

## ABSTRACT

This invention relates to a method for making a genetically modified cotton plant by regenerating a whole plant from a plant cell that has been transfected with DNA sequences including a gene, the expression of which results in suppression of oil biosynthesis in the developing seed. Plants made according to this method exhibit increased production of fiber. Also disclosed is a method for making a non-genetically modified cotton plant with reduced seed-oil content by selecting native alleles or alleles produced through mutagenesis that result in reduced oil content with resulting enhanced fiber yield. Methods are disclosed for developing commercially acceptable cultivars that contain the cottonseed-oil suppression trait. Plant cells, plant tissues, plant seed and whole plants containing the above DNA sequences and alleles form part of the invention.

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